

Discussion of
***“All in a day’s work: What do we learn from
Analysts’ Bloomberg Usage”***
by Ben-Rephael, Carlin, Da, and Israelsen

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Discussion outline

- What they do/What we learn
- Placing the paper in existing research
- Some comments, general and specific

What they do/What we learn

- Measure analysts' work habits using Bloomberg terminal usage data:
 - Avg. Workday: General effort
 - % Away Days: Soft information production
- Both measures are positively associated with forecast accuracy
- Traveling analysts' accuracy suffered during COVID.
- High-commute analysts experienced increase in accuracy during COVID.

Putting this in context

- There are lots of participants in capital markets where:
 - People generally agree they play an important role
 - People aren't really sure exactly what they do, what their incentives are, or the consequences of their actions

Important participants/institutions

- Managers
- Auditors
- Investor Relations
- Legal Counsel

- Analysts
- SEC/EDGAR
- Media
 - Traditional press
 - Social media
- Short sellers
- Wire services (e.g., PR Newswire and BusinessWire)

A variety of empirical approaches

- Direct measurement/observation:
 - Surveys (Graham et al. 2005)
 - Interventions (Lawrence et al. JAE 2018)
- Outages/disruptions
 - Weather disrupts local media (Engelberg and Parsons 2011 JF)
 - Twitter outages (Rakowski et al. 2021 FM)
 - EDGAR outage (Heilig et al. 2021 SSRN)
 - Short selling bans (many)
 - Brokerage closures (cutting off a source of hedge fund information) (Chen et al. JFE 2020)

In the analyst world

A lot of research indirectly examines analyst behavior:

- Look at analysts' outputs and see how they vary with factors that we speculate might influence them (e.g., incentives from IPOs)
- We can infer incentives from promotion, salary, and institutional investor rankings
- “Yet, very basic characteristics related to analysts' work habits remain understudied”

In the analyst world

- But we can more directly measure some of their actions:
 - Surveys (Brown et al. 2015 JAR, 2016 JAE)
 - Single firm deep dive (Soltes 2014)
 - Participation in conference calls (Mayew 2008)
 - Meetings with managers in roadshows (Bushee et al. 2018 JAE)
 - Private in-house meetings (Bowen et al. 2018 RAST)
 - Read their reports (Huang et al. 2014 TAR, 2018 MS)
- 2 papers seem especially relevant:
 - Information acquisition via EDGAR (Gibbons et al. 2021 MS)
 - Work hours as estimated with NYC taxi patterns (Okat and Vasudevan 2023 MS)

Where does this paper fit?

- Currently, the paper seems largely about the data/Bloomberg measures.
- Less clear exactly what question they're trying to answer with that data.

Some Comments

1. Analysts and confounding factors
2. The role of teams
3. What are these measures capturing?
4. What do we ultimately learn?

Confounding factors

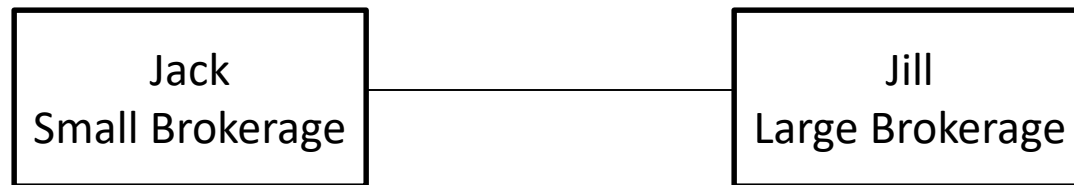
It can be challenging to think about confounding factors. For example, suppose that “larger brokerage firms have more resources and thus are more accurate”.

Maybe!

But maybe high-quality analysts are matched to high-quality (large) brokerages. So it’s really the analyst quality that matters, and the brokerage is irrelevant.

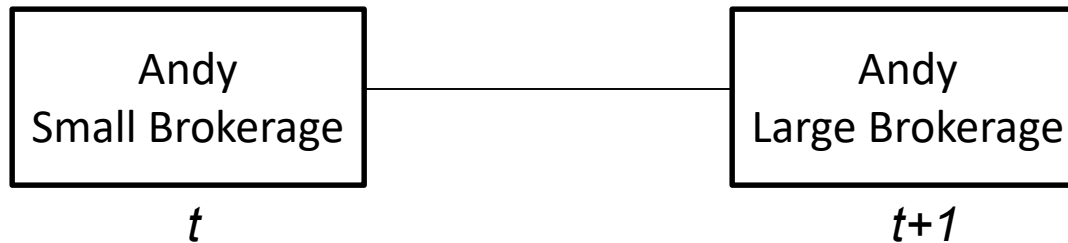
Confounding factors

You observe a difference in accuracy between two analysts at two brokerages. Is it the brokerage or is it the (endogenously matched) analyst?



You need a way to address that. Maybe use analyst fixed effects to remove analyst-specific attributes.

Confounding factors



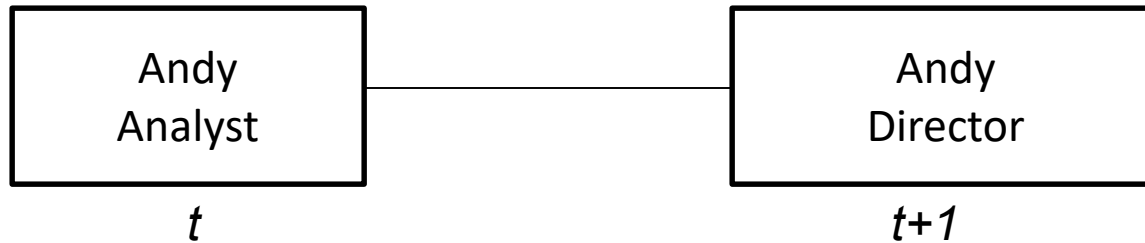
- Measure forecast accuracy for forecasts issued in period t and for forecasts issued in period $t+1$.
- Assume that Andy has innate attributes that don't change over time (particularly witty or insightful?).
- You can remove the average "Andy" effect to assess the brokerage effect.

In this paper

- “The strong associations [...] are obtained with analyst fixed effects, and therefore point towards a causal interpretation.”
- But also: “AWL and PAD are both analyst characteristics”
- If the measures are analyst characteristics, and we remove the analyst fixed effect, what’s left over that we’re studying?

Confounding factors

Here, they face a slightly different challenge – analysts have different roles at different stages of their careers



Do analyst fixed effects address this? No.

Does this matter in this setting? Probably yes.

The role of teams

- This paper (and a lot of analyst research) views analysts as individual agents who work independently to produce output.
- But analysts often work in teams.
 - More than 70% of annual earnings forecasts are issued by teams, rather than individuals. (Fang and Hope 2021)

The role of teams – Fang and Hope 2021

May 5, 2015

Equity Research

Myriad Genetics, Inc.

MYGN: FQ3 2015 Earnings Full Analysis

• **What to do from here.** FQ3 makes the second quarter in a row to see a significant reduction in FY 2015 guidance, which is bound to leave a sour taste in investors' mouths. Once again, the primary reasons are delays in reimbursement, both in the U.S. and internationally. While delays in the diagnostics business seem to be the exception rather than the rule and are largely outside of management's control, they still may be likely to shake credibility in guidance. All of this stated, however, we still think the market may be overestimating how quickly Myriad is likely to lose market share to lower-priced competition. In fact, this quarter, the company indicated it did not see any share loss on a sequential basis, which is notable, despite being difficult to verify. And while delays in prostate reimbursement are frustrating, we still believe a reacceleration of growth once reimbursement starts to flow could help sentiment on the stock. Balancing all these factors continues to leave us decidedly neutral on the stock. Reducing our FY 2015/2016 EPS to \$1.45/\$1.89 from \$1.53/\$1.96 previously and reducing our valuation range to \$33-34 from \$35-37 previously.

• **Financial highlights.** MYGN reported FQ3 EPS of \$0.40 on revenue of \$180MM compared to consensus of \$0.39 on revenue of \$183MM. The company believes severe weather was a \$4MM headwind to revenue and a \$0.03 headwind to EPS, although investors are likely to be frustrated with that explanation since GHDX seemed to manage through the weather issues with a less dramatic impact.

• **Guidance highlights.** The company reduced FY 2015 EPS guidance to \$1.44-1.46 from \$1.50-1.55 previously, while reducing revenue guidance to \$720-722MM from \$730-740MM previously. The company cites the impact of severe weather of FQ3 revenue, the delay of Medicare reimbursement for Prolaris until FY 2016, and a delay in international reimbursement.

• **Other highlights.** The company acquired a clinic in Germany for the purposes of facilitating penetration of the German market by allowing Myriad to negotiate reimbursement with government and private insurance providers while also collaborating with hospitals and physicians. The company did not disclose the revenue contribution of the clinical but indicates the acquisition will be slightly accretive to EPS. The acquisition cost Myriad about \$20-25 million. Even though the revenue contribution may be small, adding it to the revenue mix makes the guidance reduction look more severe.

Valuation Range: \$33.00 to \$34.00 from \$35.00 to \$37.00

Our valuation range is DCF-based (WACC = 11.0%; terminal NOPLAT growth = 2%) and represents an P/E multiple of 15x our CY2015 estimate. Risks include: (1) intensifying competition in hereditary breast cancer testing; (2) reimbursement coverage delays or cuts; (3) pricing pressure from competition or payers; and (4) FDA regulation of laboratory developed tests (LDTs).

Investment Thesis:

We acknowledge the growing risks to Myriad's core franchise with lower-priced tests coming on the market. However, we think consensus may underestimate the stickiness of Myriad's myRisk test among physicians. We believe focus may shift to growth in the prostate market once that test begins receiving reimbursement.



Market Perform / V

Sector: Diagnostics
Underweight

Earnings Estimate Revised Down

EPS	2014A		2015E		2016E	
	Q1	Q2	Curr.	Prior	Curr.	Prior
Q1 (Sep.)	\$0.68	\$0.25	A	NC	\$0.42	0.48
Q2 (Dec.)	0.66	0.40	A	NC	0.47	0.46
Q3 (Mar.)	0.60	0.40	A	0.39	0.49	0.50
Q4 (June)	0.47	0.41	0.50	0.52	0.51	
FY	\$2.46	\$1.45	1.53	\$1.89	1.96	
CY	\$1.72	\$1.60		\$2.09		
FY P/EPS	14.0x	23.8x		18.3x		
Rev.(MM)	\$758	\$721		\$789		

Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters. NA = Not Available, NC = No Change, XE = No Estimate, NM = Not Meaningful. * = Volatile, ** = Company is in the Priority Stock List.

Non-GAAP EPS excludes amortization of acquired intangible assets.

Ticker	MYGN
Price (05/05/2015)	\$34.54
52-Week Range:	\$31-42
Shares Outstanding: (MM)	71.1
Market Cap.: (MM)	\$2,455.8
S&P 500:	2,089.46
Avg. Daily Vol.:	750,775
Dividend/Yield:	\$0.00/0.0%
LT Debt: (MM)	\$0.0
LT Debt/Total Cap.:	0.0%
ROE:	27.0%
3-5 Yr. Est. Growth Rate:	22.0%
CY 2015 Est. P/EPS-to-Growth:	0.9x
Last Reporting Date:	05/05/2015

Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters.

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December 18, 2014



Equity Research

Genomic Health, Inc.

GHDX: Initiating Coverage With Market Perform Rating

Market Perform

Sector: Diagnostics
Underweight

Initiation of Coverage

• **Summary.** We are initiating coverage of GHDX with a Market Perform rating, a 12-month, DCF-derived valuation range of \$33-35, and 2014/2015 EPS estimates of -\$0.82/-0.49. We believe the company has substantial growth opportunities, particularly in prostate cancer and in international markets, with upside optionality in liquid biopsy tests. The company has done a good job protecting its franchise and driving reimbursement with extensive clinical data, but competitive threats and reimbursement hurdles still loom large. Also, long-term profitability remains uncertain. Given these factors and current valuation levels, we believe the risk/reward profile is balanced.

• **Prostate and international could accelerate growth.** We believe the company's investments in its prostate cancer test and in international markets will allow revenue growth to accelerate in the 2015-18 time frame, following many years of decelerating growth. The addressable markets are large: In 2020, we forecast the company's addressable U.S. prostate market to be \$625 million and the international market to be \$2.5 billion. These figures compare to total company revenue of about \$280 million in 2014, about \$45 million of which is international and only a nominal amount of which is prostate. DCIS is a smaller opportunity (\$150 million by our estimate) but is growing off a very small base today. The primary growth factor for revenue growth in these large market segments is the timing and level of reimbursement, which has historically been difficult to predict. Also, these growth drivers could be partially offset by some erosion in the core invasive breast cancer franchise.

• **Competitive advantage via data.** The company has invested significant resources validating its tests and demonstrating clinical utility in numerous journal articles and conference presentations. Studies are aimed at validating the test's accuracy, demonstrating that the test offers meaningful information to alter physician behavior, and demonstrating that the test offers an economic benefit to payers. Because of the company's significant investments, Oncotype DX has been accepted as standard of care for invasive breast cancer in the U.S., and we believe the growing body of data on other tests and indications will create similar traction. It is time consuming and expensive to generate useful data, which we believe gives Genomic Health a strong (but not insurmountable) competitive advantage.

• **FOR MORE INFORMATION.** Please see our report entitled "Cancer MDX: Personalized Medicine's Acid Test."

Valuation Range: \$33.00 to \$35.00 from NE to NE

Our valuation range is DCF-based (WACC = 10.5%; terminal NOPLAT growth = 2%) and represents an EV/Sales multiple of 3.2x our 2015 estimate. Risks include: (1) intensifying competition; (2) reimbursement coverage delays or cuts; (3) pricing pressure from competition or payers; (4) limited profitability; and (5) FDA regulation of LDTs.

Investment Thesis:

We believe the company has substantial growth opportunities in prostate cancer and in international markets. We also think the company has done a good job generating valuable clinical data. However, potential near-term competition and lack of profitability keep us on the sidelines.

EPS	2013A		2014E		2015E	
	Q1	Q2	Curr.	Prior	Curr.	Prior
Q1 (Mar.)	(\$0.03)	(\$0.24)	A	NC	(\$0.32)	NE
Q2 (June)	(0.10)	(0.15)	A	NC	(0.12)	NE
Q3 (Sep.)	0.02	(0.20)	A	NC	(0.21)	NE
Q4 (Dec.)	(0.28)	(0.23)		NE	(0.13)	NE
FY	(\$0.40)	(\$0.82)		NE	(\$0.49)	NE
CY	(\$0.40)	(\$0.82)		NE	(\$0.49)	NE
FY P/EPS	NM	NM		NM	NM	
Rev.(MM)	\$62	\$280		\$30		

Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters. NA = Not Available, NC = No Change, XE = No Estimate, NM = Not Meaningful. * = Volatile, ** = Company is in the Priority Stock List.

Ticker	GHDX
Price (12/18/2014)	\$31.44
52-Week Range:	\$23-38
Shares Outstanding: (MM)	31.7
Market Cap.: (MM)	\$1,010.9
S&P 500:	2,047.70
Avg. Daily Vol.:	143,908
Dividend/Yield:	\$0.00/0.0%
LT Debt: (MM)	\$0.0
LT Debt/Total Cap.:	0.0%
ROE:	NE
3-5 Yr. Est. Growth Rate:	NE
CY 2014 Est. P/E-to-Growth:	NM
Last Reporting Date:	11/04/2014

Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters.

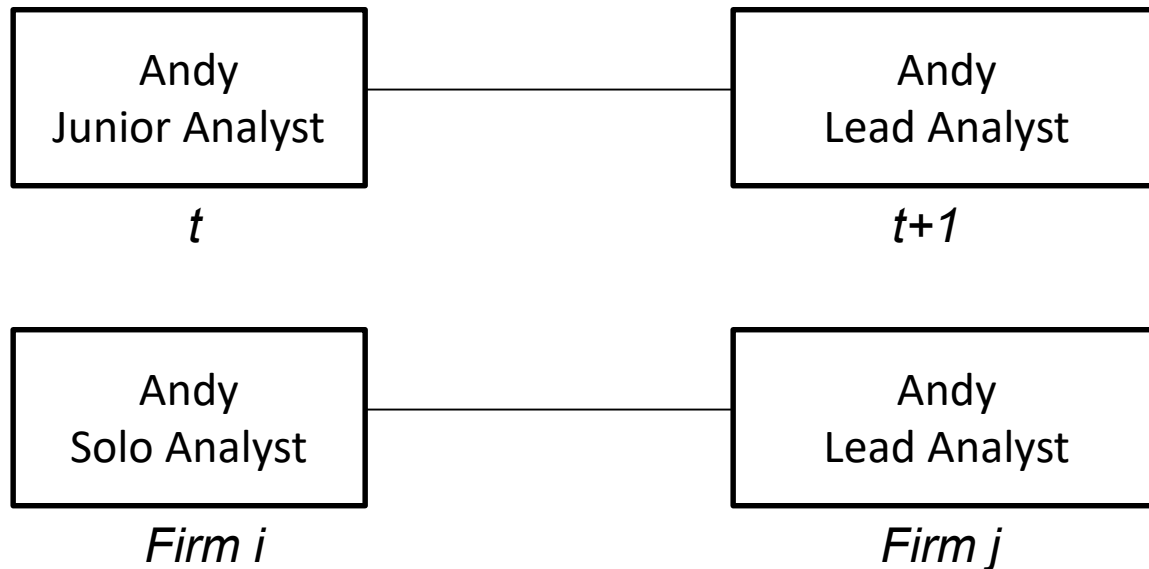
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The role of teams

- Analyst teams matter:
 - Teams issue earnings forecasts more frequently and generate more accurate earnings forecasts (Fang and Hope 2021)
 - Teams cover more firms and analysts on teams are more likely to be voted All-Star analysts in the future
 - Lead analysts contribute to the qualitative aspects of reports and are more likely to participate in calls. Associate analysts are more involved in forecasting. (Gao et al. 2022 MS)
- I'd expect that the “effort” measures (i.e., Bloomberg usage) will be correlated with the analyst's role and whether they're on a team – more senior members will spend less time at the terminal and more time with management.

Analysts in empirical research

This isn't addressed by using analyst fixed effects



Are we learning about the effect of analysts' work effort on their output? Or are we learning that analysts with different roles have different output?

What are these measures capturing?

- AWL: Average workday length
- PAD: Percentage of away days
- Authors view PAD as traveling, “working smart”, or gathering soft information.
 - These don’t all seem like exactly the same thing
 - Analysts can log in remotely (through VPN or mobile app) – how do those remote log ins affect the interpretation?
- Ultimately, it’s unclear what the authors *want* to measure, so it’s hard to assess how effectively they do so

What are these measures capturing?

Some possible alternative interpretations

- What if the causality is backwards?
 - Management can choose who visits the firm or who participates in roadshows. Is “travel time” an analyst choice, or is it a consequence of the analyst’s relationship with the manager?
- Or what if it’s just an analyst choice about work-life balance?
 - Hope et al. 2021 AOS provide some evidence that analysts’ work-life balance is associated with analyst performance
- Or maybe it’s a consequence of their covered firms experiencing material events in a particular quarter.

What do we ultimately learn?

More effort and more soft information acquisition leads to more accurate earnings forecasts.

- It seems obvious that more effort will lead to more/better output.
- We already know that soft information is valuable
- Not clear what we learn about analysts' actual work habits.

Some potential avenues

- Would be nice to better understand what type of information they're getting through these private channels, and why managers might be more open in these settings
- Can you link the analysts' behavior to their output more directly?
 - Is the content/length of their analyst reports associated with their activity?
 - Can you match the information events studied in prior research to the Bloomberg data?
 - Do they reference this soft information in their reports, and does doing so establish more credibility?
 - Do they substitute soft (private) information acquisition for public conference call Q&A?

Conclusion

- The authors have assembled some novel data on a set of information intermediaries that we don't know much about.
- Provide some interesting analyses, particularly around COVID and commute times
- *“All in a day's work: What do we learn from Analysts' Bloomberg Usage?”*